Sheet	1	of	3
oneet		OI	

			I			Coming H-			
Porm PTO-1449 (REV. 7-80)		II. S. DEPA	RTMENT OF CONMERCE D TRADEMARK OFFICE	Atty. Docket No. Serial No.					
	LIS	OF BRIOR AR	T NT	9872 08/743,360					
	CII	1820	_	Applicant Today of the control of th					
(Use	seve	ral income nec	cessary)	Ted Christopher					
				Filing Date		Group			
				November 8, 1996	<u></u>				
			U.S. I	PATENT DOCUMENTS					
EXAMINER INITIAL*		DOCUMENT NUMBER	DATE	NAMB	CLASS	SUBCLASS	(if appro		
	AA								
	AB								
	AC								
	AD				ļ				
-	AE								
	AF								
	AG								
	AH							<del></del>	
	ΑI								
	AJ								
			FOREIGN	PATENT DOCUMENTS					
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSL	ATION	
							YES ·	NO	
	AK					ļ			
	AL								
	AM								
	AN								
	AO		, ,		<u> </u>	<u>                                     </u>			
-	OTHE	R PRIOR ART (In	cluding Aut	hor, Title, Date,	Pertine	nt Pages	, Btc.)		
My	AP	"Second Harmo Albunex," Cha 1554.	onic Imagin ung, et al.	ng and Harmonic Do , <u>1994 Ultrasonic</u>	oppler I es Symp	Measurem osium, p	ents Wi p. 1551	.th 	
	AR	a Large Apert Transducer," 14, No. 5, pr	ure and a Moshfeghi, o. 415-428,		rture Found in	ocussed Med and	Biol.,	Vol.	
	AS	"Physical Acc Soc. Am. Vol	oustics: U	Iltrasonic Technic 5, Pt. 2, May 199	ques,"   95.	Makin, <u>J</u>	. Acous	st.	
	AT	"Generation of et al., <u>J. Ac</u>	of harmonic coust. Soc.	es in a focused Ga Am. 97 (3), pp	aussian 1486-14	sound f 88, Marc	ield," h 1995.	Du,	
	AU	"Nonlinear Pr Ultrasound in	copagation Med & Bio	in Doppler Ultra ol., Vol 19, No.	sound," 5, pp.	McDicke 359-364,	n, et a 1993.	al.,	
V	AV	"Multi-freque measurements, 2231-234, Apr	" Wu, et a	ducer assembly for al., <u>J. Acoust. S</u>	r nonli	near ult 93 (4),	rasonio Pt. 1,	pp.	
EXAMINER		61-		DATE CONSIDERED 6-1	-05				
* EXAMINE	R: I1	nicial if reference of	onsidered, whet	her or not ditation is in	conforman	ce with MPRE	609; draw	line	
through o	itatic	on if not in conforma	nce and not con	sidered. Include copy of	this form	Altu next o	.commit.cat1	OI 60	

Sheet	2	of	3

Form PTO-1449 (REV. 7-80)		U.S. DEPAR	TMENT OF COMMERCE TRADEMARK OFFICE	Atty. Docket No.	Serial No.			
(REV. 7-80)	LI	STOF PRIOR AR	r	9872	08/746,360			
	CIT	BA CAPPLICAN	T	Applicant				
(Use	seve	r shelpe if e	essary)	Ted Christopher				
		TRADEMEN		Filing Date		Group		
				November 8, 1996				İ
			U.S. I	PATENT DOCUMENTS				
EXAMINER		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING	
INITIAL*							(II appi	opridec,
	AA							
	AB							
	AC							
	AD							
	AE							
	AF							
	AG							
	AH							
	ΑI							
	АJ							
			FOREIGN	PATENT DOCUMENTS	T			
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	ļ	LATION
							YES	NO
	AK						ļ	
	AL							
	AM				<u> </u>			
	AN							
	AO					<u> </u>	L	
(	THE			hor, Title, Date,				
M	AP	effects," Zeqi	ri, <u>J. Aco</u>	easurements due to ust. Soc. Am. 91(5)	), pp. 2	585-2593	, May 1	
	AR	"Harmonic gene aperture sourc 3144-3151, Jun	e," Kamaku:	finite amplitude so ra, et al., <u>J. Aco</u> n	ound bea	ms from . Am. 91	a recta (6), p	angular op.
	AS	"The Enhanceme Microscopic Ob Ultrasonic Sym	servation D	nd Harmonic General By Triple Transition. 575-578.	tion In on," Dir	Ultrason , et al.	ic , <u>1993</u>	
	АТ		and finite	e amplitude effect	s," <u>Eurc</u>	pean Jou	rnal Of	
	AU	least-mean-squ Journal of the 555, January 1	are error ( Acoustica 994.	of ultrasonic pul estimates of arriv l Society of Ameri	al time, <u>ca</u> , Vol.	" Liu, e 95, No.	t al., 1, pp	The
V	AV	inhomogeneitie	s: The van llert, et a	attering media thr Cittert Zernike a al., <u>J. Acoust. So</u>	oproach	and focu	ısıng	21-
EXAMINER	1	To Sun		DATE CONSIDERED	05			
* EXAMINE through c applicant	R: In	nitial if reference come if not in conformar	onsidered, whet ace and not con	her or not citation is in sidered. Include copy of	conformance this form	e with MPRP with next c	609; dra	w line ion to

Porm PTO-144 (REV. 7-80)	19	<b>₹</b> RQQQ	RIMENT OF COMMERCE IN TRADEMARK OFFICE	Atty. Docket No.	Serial No.				
		IST OF PROOR A	1	9872		08/746,	360		
	CI	TED BY APPLICA	<b>"</b>	Applicant					
(Use	sev	eral state if n	sesary)	Ted Christopher					
		IKKU		Filing Date Group					
				November 8, 1996					
			σ.s.	PATENT DOCUMENTS					
EXAMINER INITIAL*		DOCUMENT NUMBER	DATE	NAMB	CIASS	SUBCLASS	FILING DATE		
	AA			:		i			
	AB								
	AC								
	AD								
	AE								
	AF								
	AG					·			
	AH								
	AI	·							
	АJ								
		<u> </u>	FOREIGN	PATENT DOCUMENTS	<u> </u>			_	
	-	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION		
							YES NO		
	AK								
	AL								
	AM								
	AN								
	AO								
С	THER	PRIOR ART (Inc	cluding Aut	hor, Title, Date,	Pertiner	t Pages,	Etc.)		
MI	AP			ribution in the fe		east," Z	hu, et al.,		
	AR	"An experiment by a plane cir 1, pp. 1084-10	cular pisto	gation of the nonlion," TenCate, <u>J. Ac</u> 1993.	near pro oust. So	essure f	ield produc 94 (2), Pt.	eđ	
	AS	"New approache Christopher, e 1991.	s to nonlin t al., <u>J. A</u>	ear diffractive fi coust. Soc. Am. 90	eld prop	pagation p. 488-49	," 99, July		
	AT	Waves: The Dif	ference-Fre	lliearity Parameter quency Method and ransactions, Vol.	the Seco	ond-Harmo	onic Method	1d	
*	AU				_				
	AV.							$\neg$	
		· ·							
EXAMINER	A	The		DATE CONSIDERED 6-1-	-05			$\exists$	
	110	-//	l		<u> </u>				

\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

	. ^ *	· /		00%	Docket Number (Optional) 9872		Application Number 08/	746,360	-
	INFO	RMATION DISCLOSUR (Use several sheets if neces.	E CONTON	77 8 1	Applicant(s) Ted Christopher	<del>)</del>			
		(Ose several sneets y meets	SEP-25 100	SEFICE.	Filing Date November 8, 19		Group Art Unit	3305	
<u> </u>				-5-0	ENT DOCUMENTS			3303	
*EXAMINER	REF	DOCUMENT NUMBER	DATE	Z- *	NAME	CLASS	SUBCLASS	FILING	DATE
INITIAL	KLI		10/10/95	Johnson	<del> </del>			IF APPRO	PRIATE
Aly		5,456,257		ļ. ——	et al.				
		5,540,909	7/30/96	Schutt					·
		5,577,505	11/26/96	Brock-F	isher et al.				
	_	5,628,320	5/13/97	Teo					
		5,628,322	5/13/97	Mine					
$\neg V$		5,632,277	5/27/97	Chapma	nn et al.				
· · · ·									
				FOREIG	N PATENT DOCUMENTS				
	REF	DOCUMENT NUMBER	DATE		COUNTRY	CLASS	SUBCLASS	Trans YES	lation NO
M		WO 96/13213	5/9/96	PCT					
M		EP 0 770 352 A1	5/2/97	ЕРО					
				OTHER I	OOCUMENTS (Including /	Author, Title, L	Oate, Pertinent Pa	ges, Etc.)	
	<i>,</i>	Translation of Japan	nese Patent Appl	ication Pu	ıblication Kokai: Heisei	i 8-294487			
M	<b>/</b>	"Modeling Acoustic	Field Propagation	on for Me	dical Devices" (1993) P	hD. Thesis	by Dr. Ted Ch	ristopher	
				<u>.</u>					
EXAMINEI		Thomas of the same	<u> </u>		DATE CONSIDERED  6-1-05	-			
		al if citation considered, whether					gh citation if not	in conform	ance and
not consider	ea. In	clude copy of this form with next	communication to 8	ippiicant.					

Form PTO-A820 (also form PTO-1449)

		RMATION DISCLOSUR	E CHE THOM		Docket Number (Optional) 9872		Application Number 08/	746 <b>,</b> 360
	INFO	(Use several eets if necess	E CITATION (ary)		Applicant(s) Ted Christopher			
	1_	MAY 1 7 2001 (5)			Filing Date November 8, 19	006	Group Art Unit	2205
	P C	<u> </u>		II C. D. M.		770		3305
ARVA MINIS		& MADEMARKET	<del></del>	U.S. PATI	ENT DOCUMENTS	т -		T
*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE		NAME	CLASS	SUBCLASS	FILING DATE  IF APPROPRIATE
						<u> </u>		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
		11 - 11 - 11 - 11 - 11 - 11 - 11 - 11						
				1				
						ļ	RECE MAY 2	. # 3
							702	WED
						JE	MAY 2	201 <sub>1</sub>
							HINOLOGY CEN	"ER Rozan
								- VQ
	·····			FOREIGN	PATENT DOCUMENTS			
	REF	DOCUMENT NUMBER	DATE	COUNTRY		CLASS	SUBCLASS	Translation YES NO
14		8-294487	11/12/96	Japan				
/								
						e , aber		-
		:						
				OTHER D	OCUMENTS (Including A	Author, Title, I	Date, Pertinent Pag	es, Etc.)
			· · · · · · · · · · · · · · · · · · ·		·············			
					· · · · · · · · · · · · · · · · · · ·		## <del>###################################</del>	
EXAMINEI	R /	I fens			DATE CONSIDERED  6 - 1 - 03	~		
EXAMINEI considered	R: Initia	d if citation considered, whether of copy of this form with next com	or not citation is in o	conformance			h citation if not in	conformance and not
		and	то прри					· · · · · · · · · · · · · · · · · · ·

MAR 2	O INFORMATION DISCLOSURE CITATION  O Use several sheets if necessary)  MAR 2 9 2004 ©				Applicant(s) Ted Christopher Filing Date  November 8, 1996  Application Number  One Number						
*EXAMINER	D CAMP!	\$		U.S. PAT	ENT DOCUMENTS	•					
*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME		CLASS	SUBCLASS		G DATE ROPRIATE		
1		6,023,977	2/15/00	Langdo	on, et al.				OTRIATE		
M		5,415,175	5/16/95	Hanafy	, et al.	A L					
	,										
							RECI	EIVE	D		
		··		,			APR -	1 2004			
							TECHNOLOGY	CENTER 3	700		
		<u></u>									
			· · · · · · · · · · · · · · · · · · ·	FOREIG	N PATENT DOCUMENTS						
	REF	DOCUMENT NUMBER	DATE		COUNTRY CLASS		SUBCLASS	Tran YES	NO NO		
			-						ļ		
							<u> </u>	ļ	· ·		
		•		OTHER	DOCUMENTS (1 1 1)		Note: Double and D	F4-)			
				OTHER.	DOCUMENTS (Including	Auinor, Tille, L	vaie, reminent Pi	uges, ElC.)			
							י יי				
EXAMINER					DATE CONSIDERED 6-1-05						
		l if citation considered, whether lude copy of this form with next				Draw line throu	igh citation if no	t in conform	nance and		
					: :						

Form PTO-A820 (also form PTO-1449)

. j.					Docket Number (Optiona 9872		Application Num	nber 8/746,360	
RE	ORMAT CE	ION DISCLOSURE Leets if neces	CITATION (sary)		Applicant(s)	Ted Chr	istopher		
	N 27				Filing Date November		Group Art Unit	3737	
			U.S. 1	PATENT	DOCUMENTS		•		
	irector's Group 3	700 CUMENT NUMBER	DATE		NAME	CLASS	SUBCLASS	FILING IF APPRO	
N		5,833,613	11/10/1998	Aver	kiou et al.				
s/N		6,315,729 B1	11/13/2001	Aver	kiou et al.				
1/1		6,575,910 B2	6/10/2003	Aver	kiou et al.				
M		6,540,684 B2	4/1/2003	Aver	kiou et al.				
YM		5,706,819	1/13/1998	Hwa	ng et al.				
M		5,951,478	9/14/1999	Hwa	ng et al.				
rest		60/018,095	5/22/1996						
M		60/013,950	3/22/1996						
M		60/032,771	11/26/1996						
//		60/005,009	10/10/1995						
<del>- / · i</del>									
			FOREIGN	PATE	NT DOCUMENTS	}			
								TRANSL	ATION
	REF	DOCUMENT NUMBER	DATE		COUNTRY	CLASS	SUBCLASS	YES	NO
		OTHER DOCU	JMENTS (Inclu	ıding A	uthor, Title, Date, P	Pertinent Pages	, Etc.)		
EXAMINER		The h	;		DATE CONSIDE			****	
EXAMINER	t: Initial	if citation considered	i, whether or n	ot citat			609; Draw li	ne through	n

Form PTO-A820 U.S. DEPARTMENT OF COMMERCE (also form PTO-1449) P09A/REV04

citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Patent and Trademark Office\*

I	NEO	RMATION DISCLOSURE	CITATION		Oocket Number (Optional) 9872 Applicant(s)		Application Number 08/7	46,360	
	HTV.	(Use several sheets if necessary	De Cot		Ted Christopher Filing Date November	8. 1996	Group Art Unit	3305	
		FEB 2	0 1983 👸	U.S. PATE	NT DOCUMENTS	-,			_
EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE		NAME	· CLASS	SUBCLASS	FILING IF APPRO	
		5,706,819	1/13/98	Hwang e	t al.				
FNY	. <del></del>								
	<u> </u>								
<u>·</u>		· · · · · · · · · · · · · · · · · · ·							
							·		
•					<u> </u>				
		<u>.</u>							
							<u>·</u>		
		· · · · · · · · · · · · · · · · · · ·						<del>                                     </del>	
	<u></u>		1	FORFICE	N PATENT DOCUME	ENTS	·	<u> </u>	<del></del> ,
	<u> </u>		DATE	TOREIGI	COUNTRY CLASS		S SUBCLASS	Translation	
	REF	DOCUMENT NUMBER	DATE					YES	NO
				<u> </u>					
	ļ			<del> </del>					
		· · · · · · · · · · · · · · · · · · ·		<u> </u>					
								<del> </del>	<u> </u>
	<del></del> -		<u> </u>	OTHER I	DOCUMENTS (Inc.	luding Author, Tit	le, Date, Pertinent P	ages, Etc.)	
					· · · · · · · · · · · · · · · · · · ·				
,									
EXAMINE	ER	Alm	••		DATE CONSIDERE	ED 5			
EXAMINE	ER: Ini	Hal if citation considered, whether include copy of this form with next	or not citation is i	in conformar			hrough citation if n	ot in conform	nance and

Application Number Docket Number (Optional) 08/746,360 Applicant(s) INFORMATION DISCLOSURE CIT **Ted Christopher** (Use several sheets if necessary) Filing Date Group Art Unit 3305 **November 8, 1996** U.S. PATENT DOCUMENTS FILING DATE EXAMINER SUBCLASS CLASS NAME DOCUMENT NUMBER DATE INITIAL IF APPROPRIATE 04/27/99 Zhao 5,897,500 Ramamurthy, et al. 5,846,202 12/08/98 11/10/98 Dodd, et al. 5,833,614 Averkiou, et al. 11/10/98 5,833,613 Hossack, et al. 5,740,128 04/14/98 Brock-Fisher, et al. 11/26/96 5,577,505 03/07/95 Hedberg, et al. 5,396,285 Murashita, et al. 5,313,948 05/24/94 05/12/92 Cohen 5,111,823 Wells 07/23/91 5,034,931 09/09/86 Shimura, et al. 4,610,255 FOREIGN PATENT DOCUMENTS SUBCLASS? REF DOCUMENT NUMBER DATE COUNTRY CLASS NO 851 241 A2 07/01/98 Europe OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) Averkiou, et al., (1995), "Measurements of harmonic generation in a focused finite-amplitude sound beam", J. Acoust. Soc. Am 98(6), pp. 3439-3442.

Dunn, et al., (1981), "Ultrasonic determination of the nonlinearity parameter B/A for biological media", J. Acoust. Soc. Am. 69(4), pp. 1210-1212.

EXAMINER

DATE CONSIDERED

6-1-05

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.